



FIG. 1

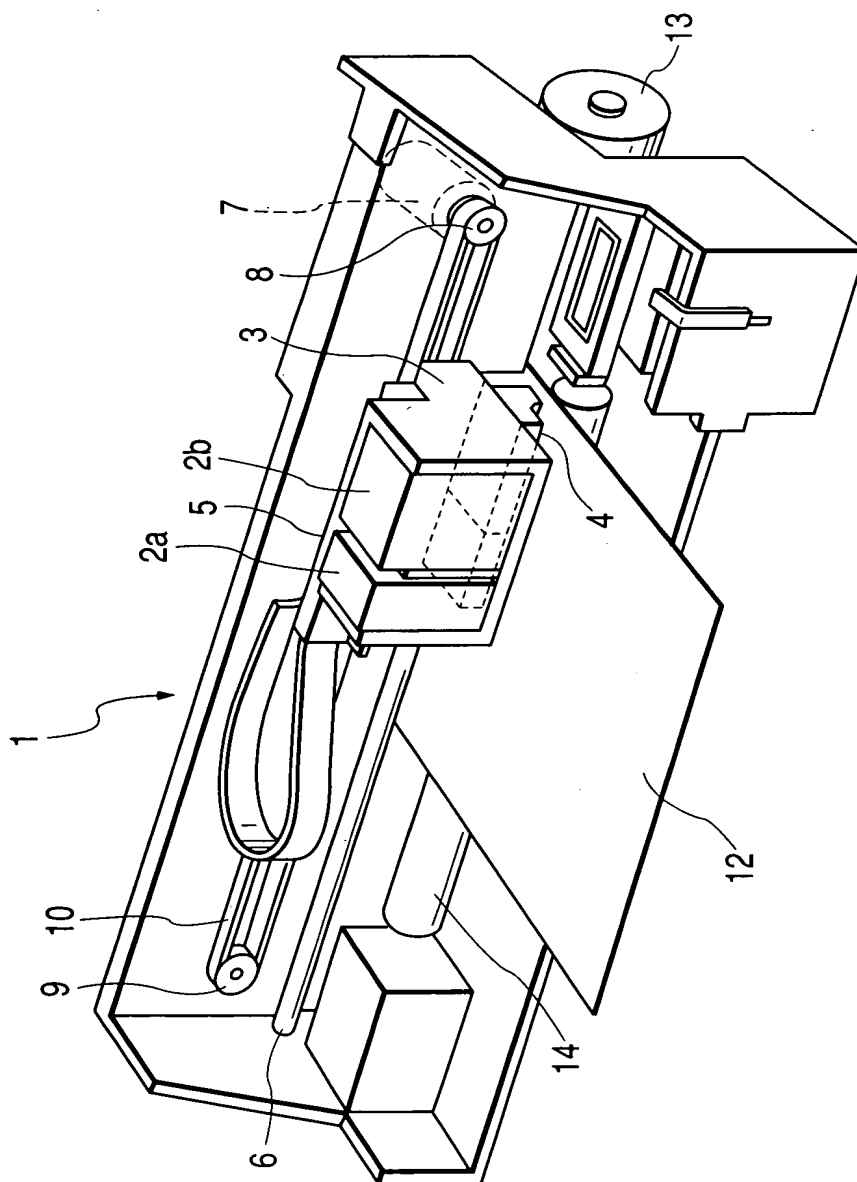


FIG. 2A

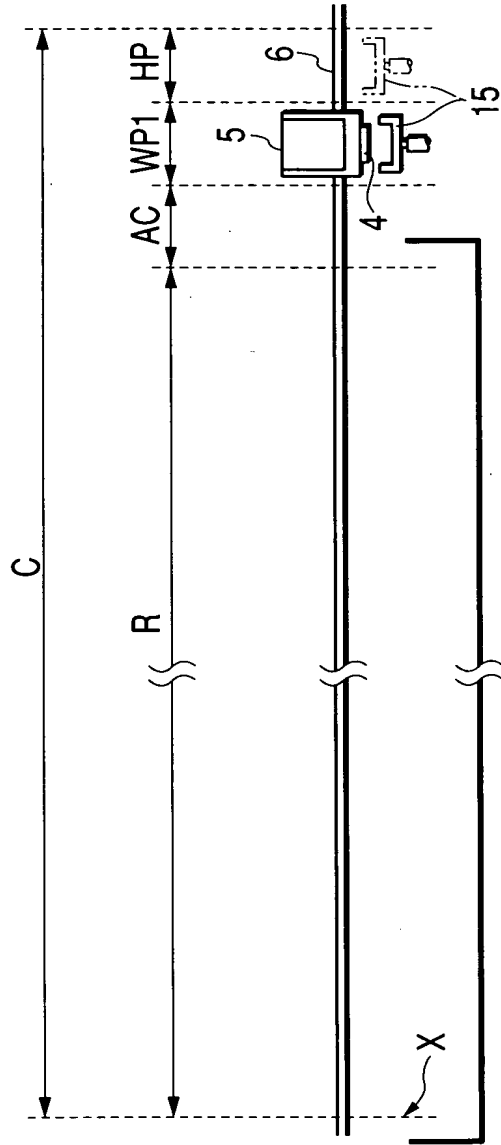


FIG. 2B

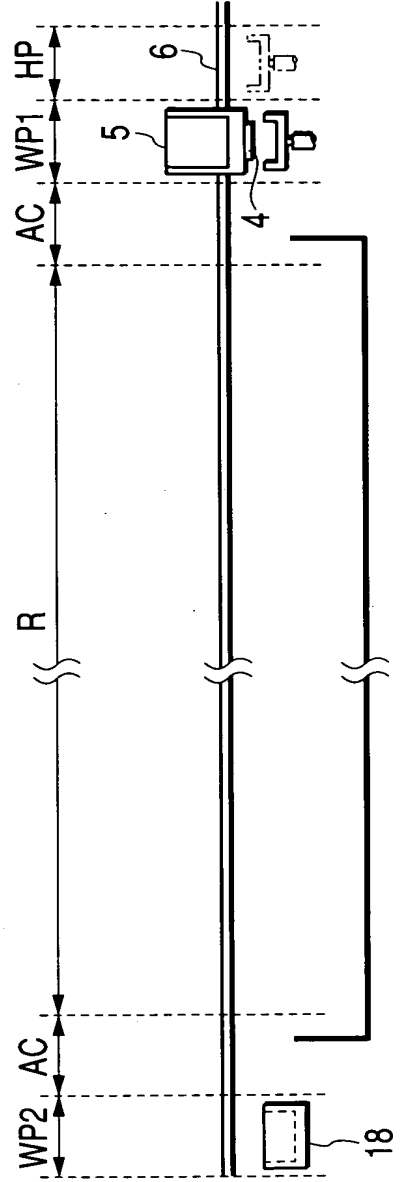


FIG. 3A

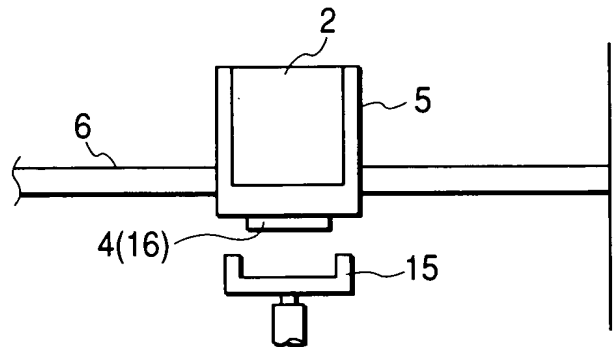


FIG. 3B

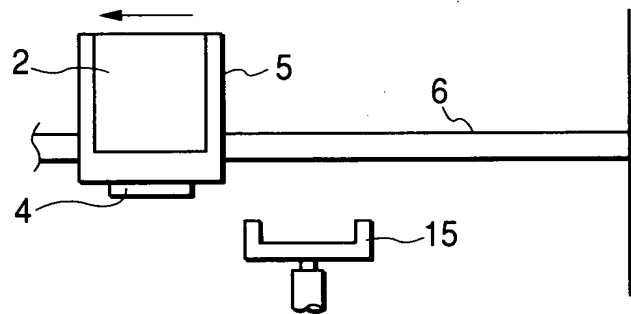


FIG. 3C

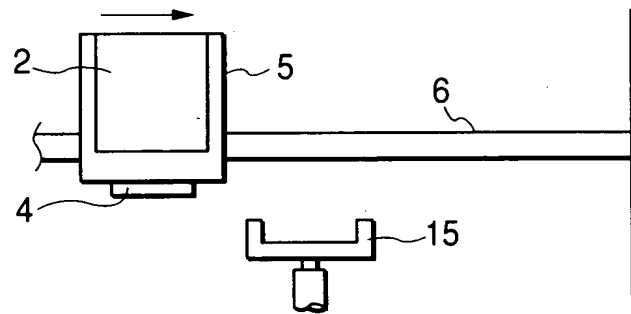
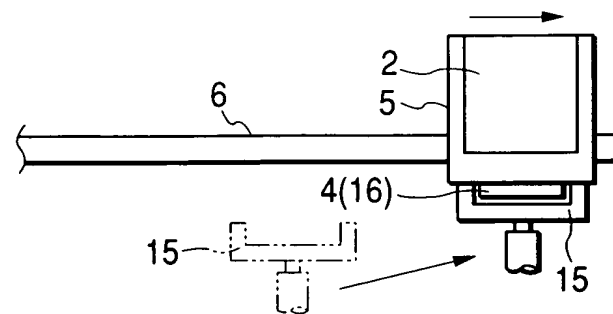


FIG. 3D



A cross-sectional view of a semiconductor device 4. The device features a substrate 16 with a base layer 17. A central region 21 is defined by a series of vertical lines, with sub-regions 21a, 21b, 21c, and 21d. A layer 88 is positioned above the base layer 17, and a layer 89 is located within the central region 21. A layer 82 is situated below the base layer 17. A layer 83 is located at the bottom of the device. A layer 84 is positioned above the central region 21. A layer 87 is located at the top of the device. A layer 71 is positioned above the central region 21. A layer 72 is located at the top of the device. A layer 75 is positioned above the central region 21. A layer 77 is located at the top of the device. A layer 74 is positioned above the central region 21. A layer 16 is located at the bottom of the device. A layer 22 is positioned above the central region 21. A layer 83 is located at the bottom of the device. A layer 82 is situated below the base layer 17. A layer 88 is positioned above the base layer 17, and a layer 89 is located within the central region 21. A layer 84 is positioned above the central region 21. A layer 87 is located at the top of the device. A layer 71 is positioned above the central region 21. A layer 72 is located at the top of the device. A layer 75 is positioned above the central region 21. A layer 77 is located at the top of the device. A layer 74 is positioned above the central region 21. A layer 16 is located at the bottom of the device. A layer 22 is positioned above the central region 21.

FIG. 5

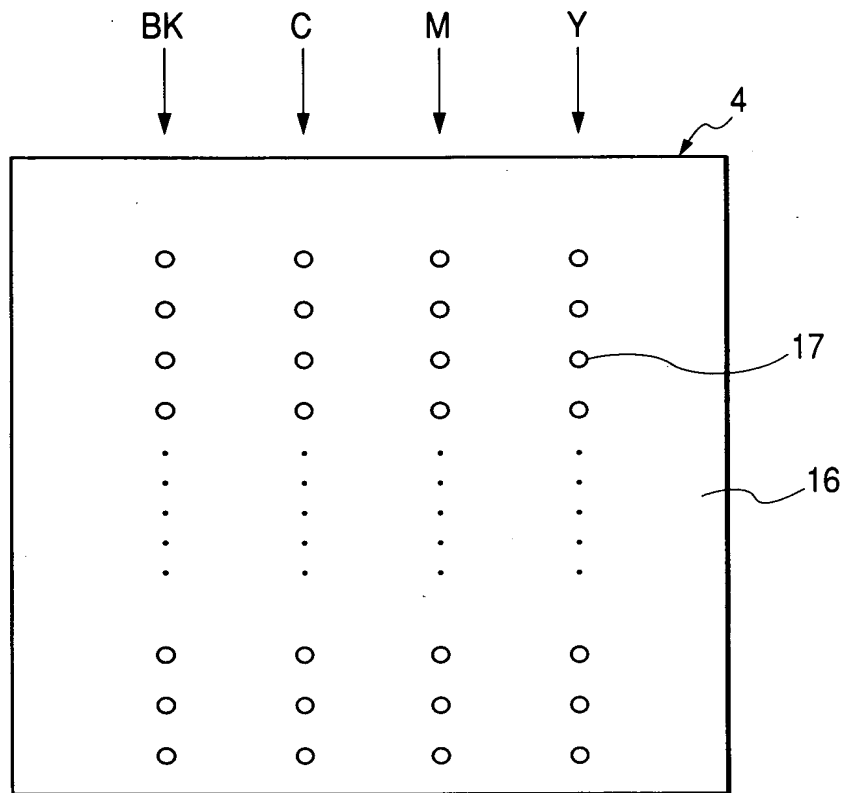


FIG. 6

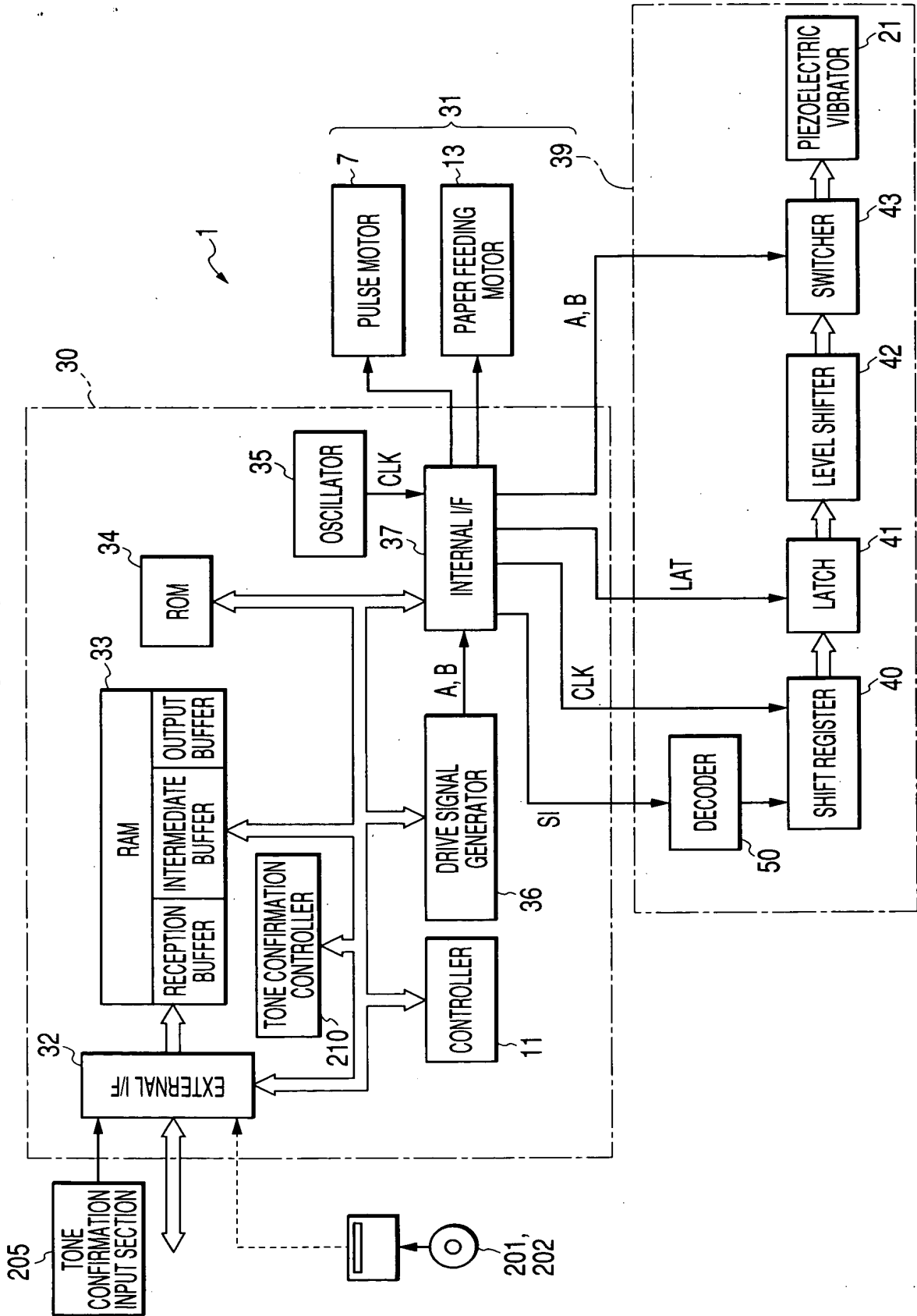


FIG. 7

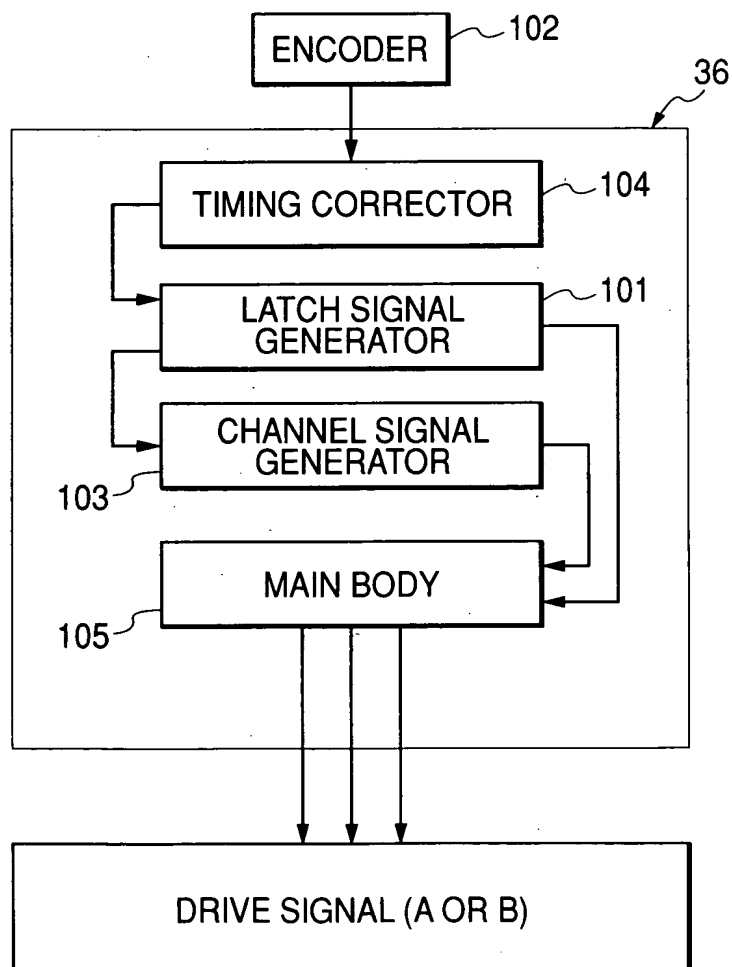


FIG. 8

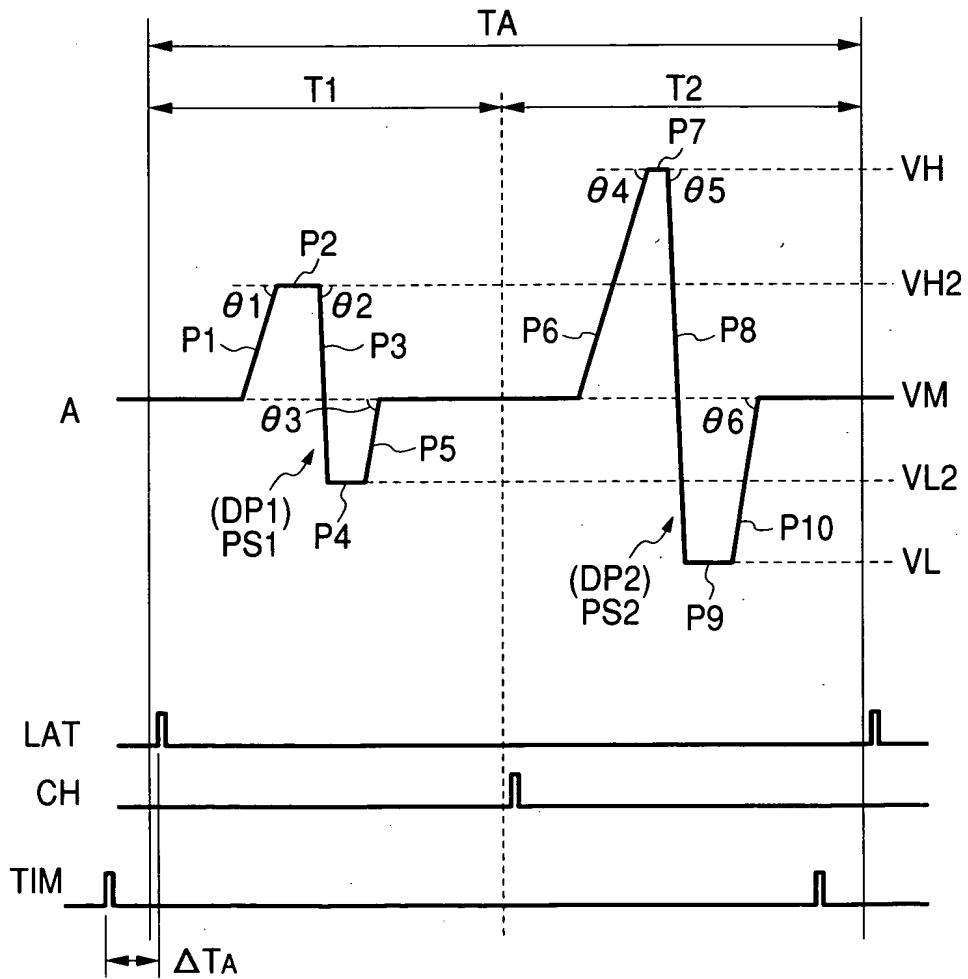


FIG. 9

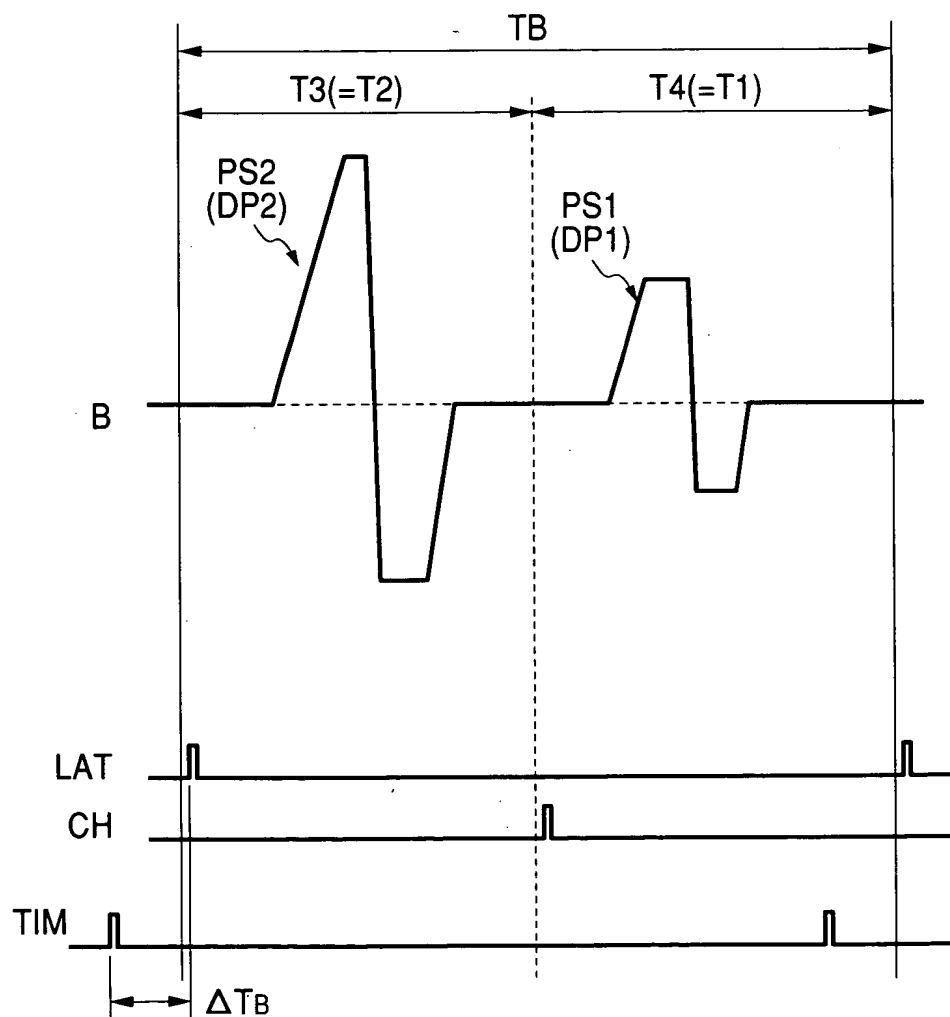


FIG. 10

INK WEIGHT RATIO	ID
$x < 90.5$	40
$90.5 \leq x < 91.5$	41
$91.5 \leq x < 92.5$	42
$92.5 \leq x < 93.5$	43
$93.5 \leq x < 94.5$	44
$94.5 \leq x < 95.5$	45
$95.5 \leq x < 96.5$	46
$96.5 \leq x < 97.5$	47
$97.5 \leq x < 98.5$	48
$98.5 \leq x < 99.5$	49
$99.5 \leq x < 100.5$	50
$100.5 \leq x < 101.5$	51
$101.5 \leq x < 102.5$	52
$102.5 \leq x < 103.5$	53
$103.5 \leq x < 104.5$	54
$104.5 \leq x < 105.5$	55
$105.5 \leq x < 106.5$	56
$106.5 \leq x < 107.5$	57
$107.5 \leq x < 108.5$	58
$108.5 \leq x < 109.5$	59
$109.5 \leq x$	60

FIG. 11

	ARRAY (BK)	ARRAY (C)	ARRAY (M)	ARRAY (Y)	DESIGN VALUE
INK WEIGHT (ng)	20	21	18	21	20
COLOR ADJUST ID	50	55	40	55	

BK ARRAY ID : $20/20 = 100\% \rightarrow \text{ID} = 50$

C ARRAY ID : $21/20 = 105\% \rightarrow \text{ID} = 55$

M ARRAY ID : $18/20 = 90\% \rightarrow \text{ID} = 40$

Y ARRAY ID : $21/20 = 105\% \rightarrow \text{ID} = 55$

FIG. 12

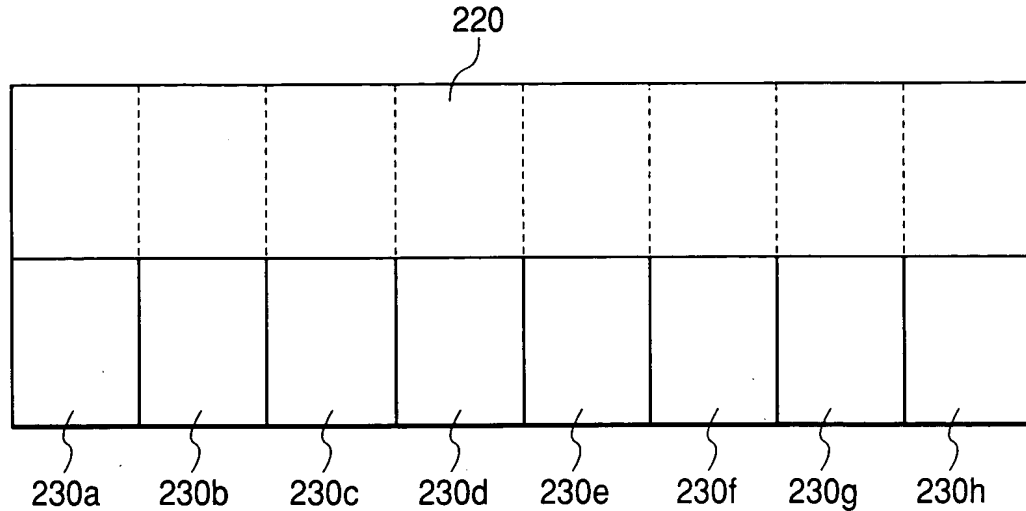


FIG. 13

	COEFFICIENT FOR COLOR ADJUST VALUE (CYAN)	COEFFICIENT FOR COLOR ADJUST VALUE (MAGENTA)	COEFFICIENT FOR COLOR ADJUST VALUE (YELLOW)
CORRECTION COEFFICIENT GROUP a	1.10	0.90	1.00
CORRECTION COEFFICIENT GROUP b	1.05	0.95	1.00
CORRECTION COEFFICIENT GROUP c	1.00	0.95	1.05
CORRECTION COEFFICIENT GROUP d	1.00	0.90	1.10
CORRECTION COEFFICIENT GROUP e	0.90	1.00	1.10
CORRECTION COEFFICIENT GROUP f	0.95	1.00	1.05
CORRECTION COEFFICIENT GROUP g	1.05	1.00	0.95
CORRECTION COEFFICIENT GROUP h	1.10	1.00	0.90
CORRECTION COEFFICIENT GROUP i	1.00	1.10	0.90
CORRECTION COEFFICIENT GROUP j	1.00	1.05	0.95
CORRECTION COEFFICIENT GROUP k	0.95	1.05	1.00
CORRECTION COEFFICIENT GROUP l	0.90	1.10	1.00

FIG. 14

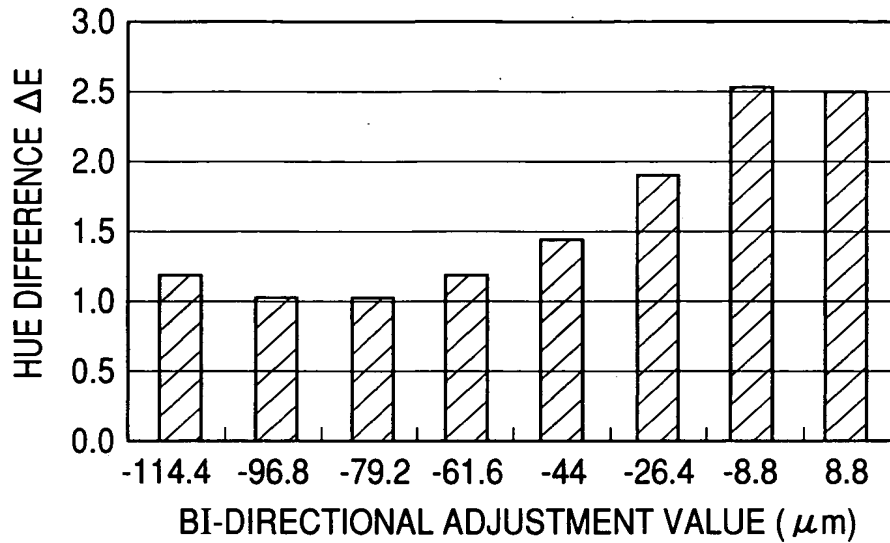


FIG. 15

BI-DIRECTIONAL ADJUSTMENT VALUE	L*	a*	b*	ΔE
-114.4	46.85	-1.18	-13.34	1.19
-96.8	46.68	-1.30	-13.04	1.03
-79.2	46.65	-1.28	-12.76	1.03
-61.6	46.53	-1.25	-13.18	1.19
-44	46.55	-1.07	-13.47	1.44
-26.4	46.58	-0.92	-14.10	1.92
-8.8	46.57	-0.48	-14.57	2.55
8.8	46.80	-0.56	-14.61	2.48
REFERENCE VALUE	47.16	-2.17	-12.76	

FIG. 17

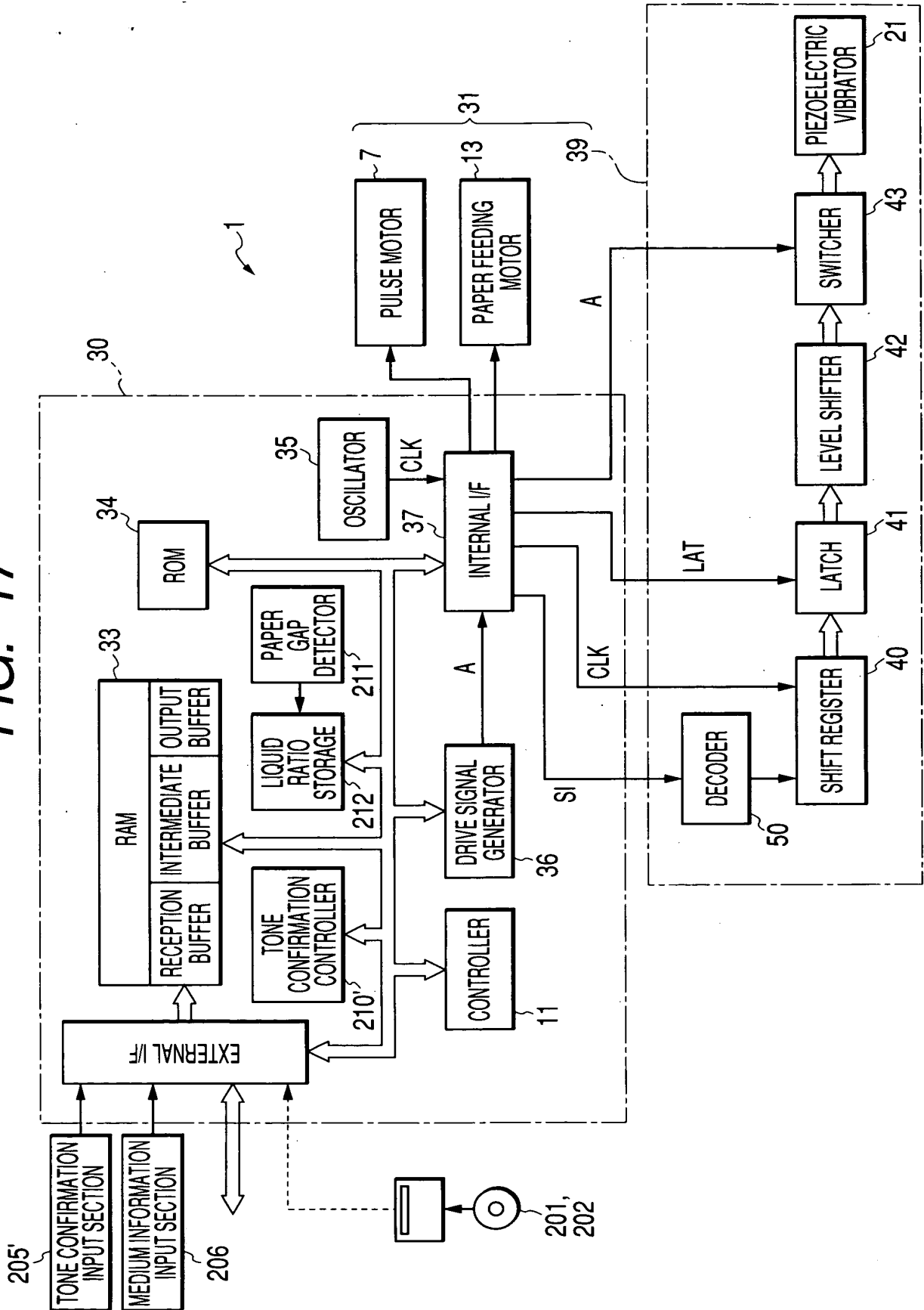


FIG. 18

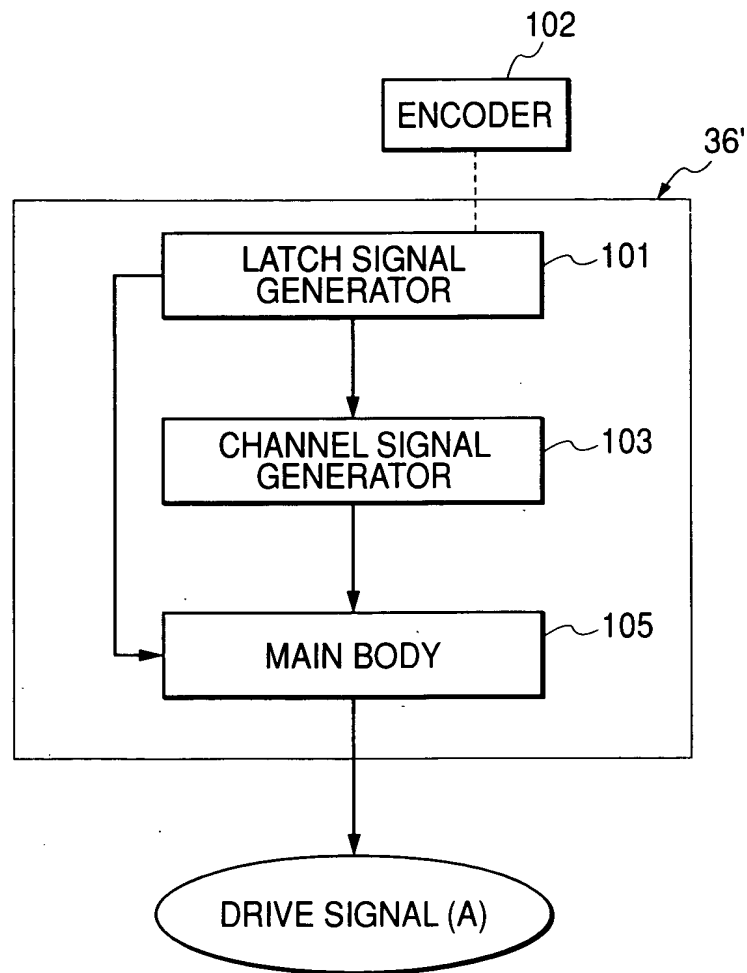


FIG. 19

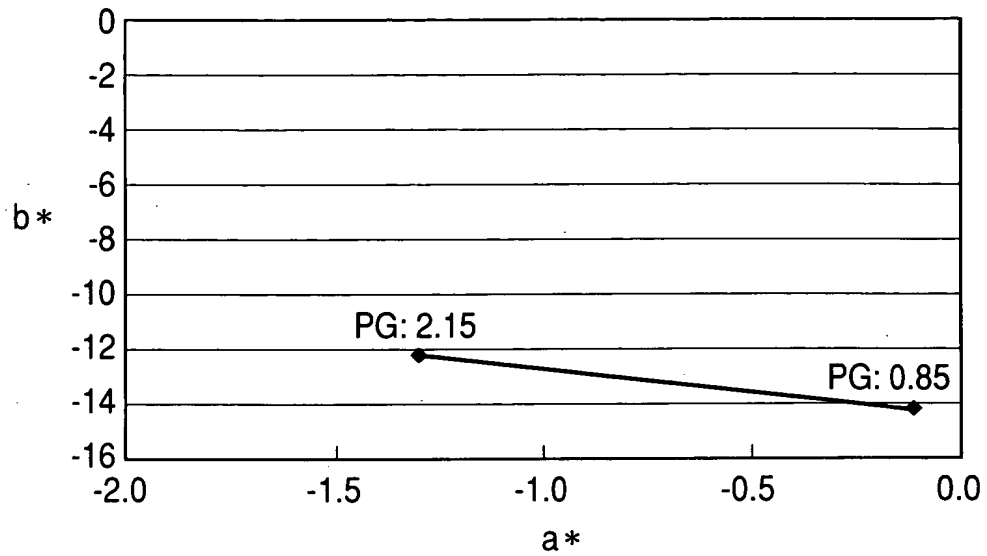


FIG. 20

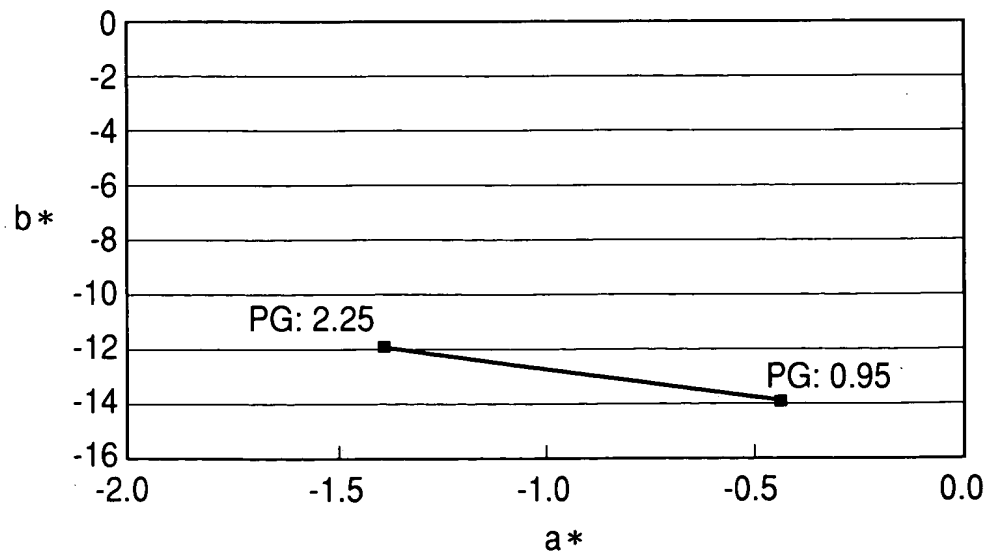


FIG. 21

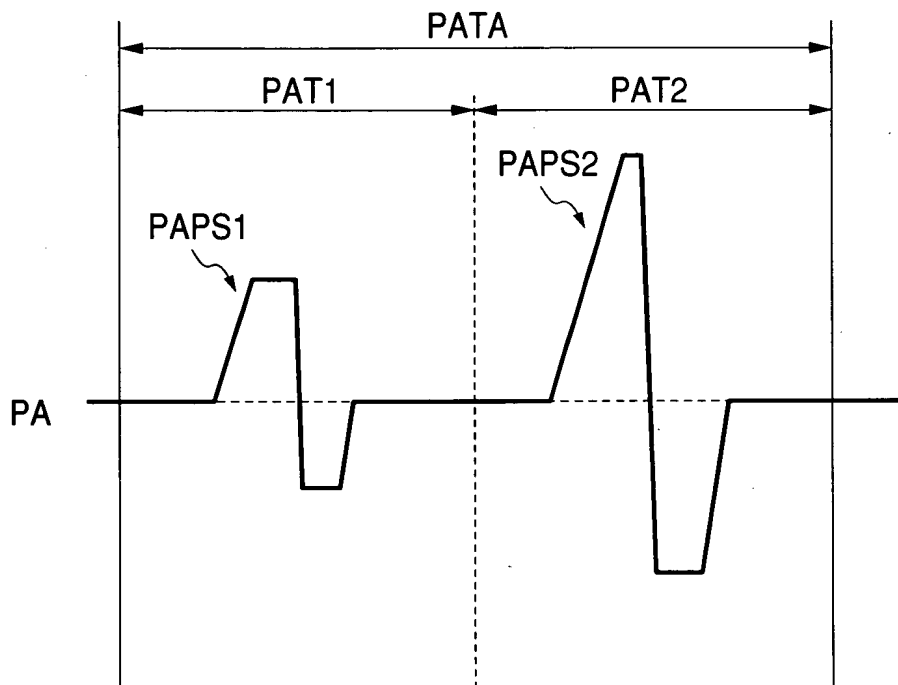


FIG. 22

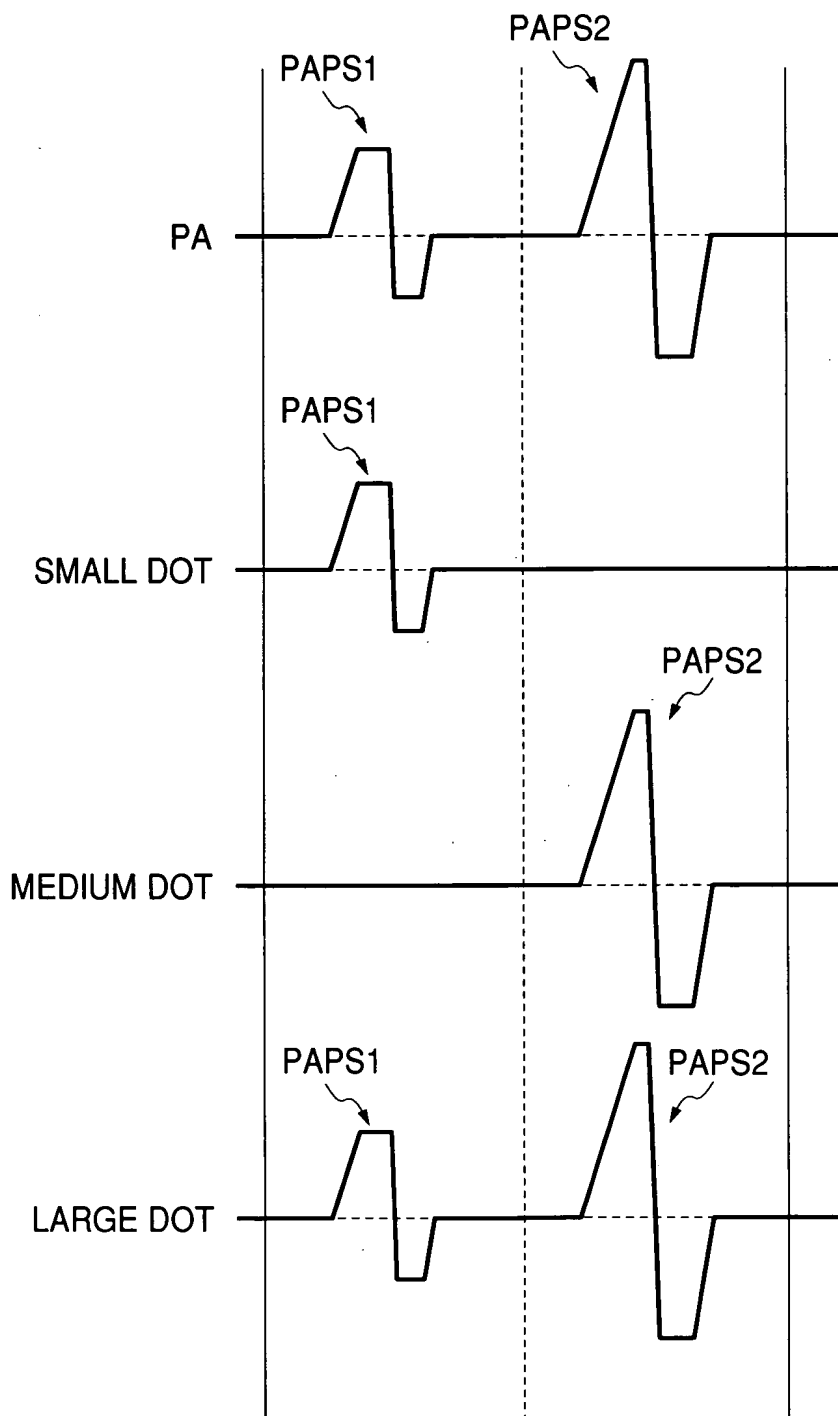


FIG. 23A

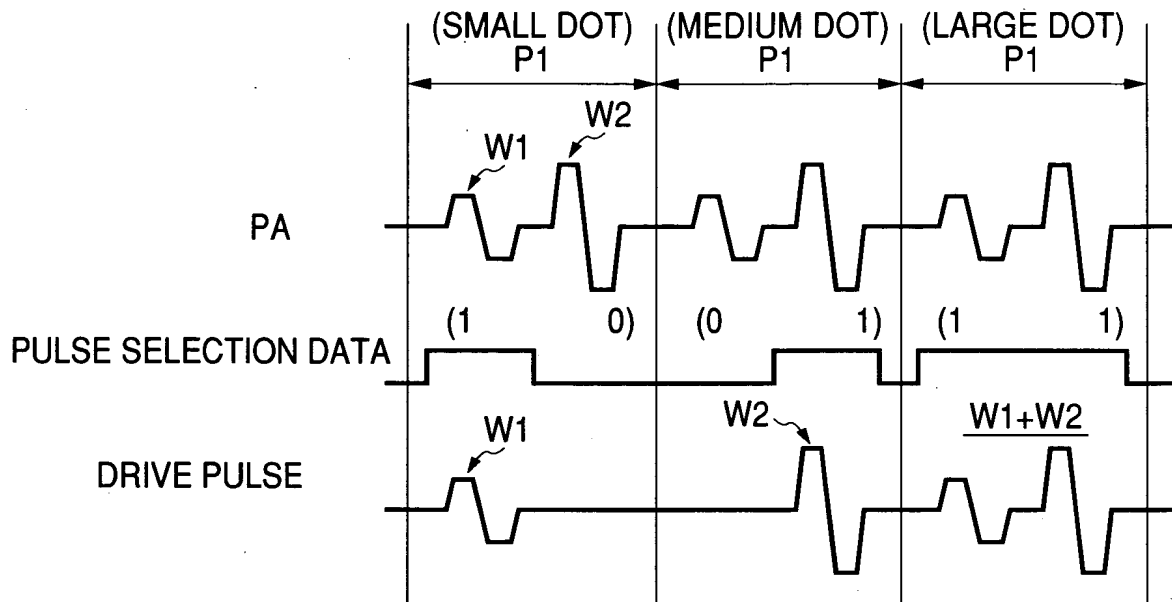


FIG. 23B

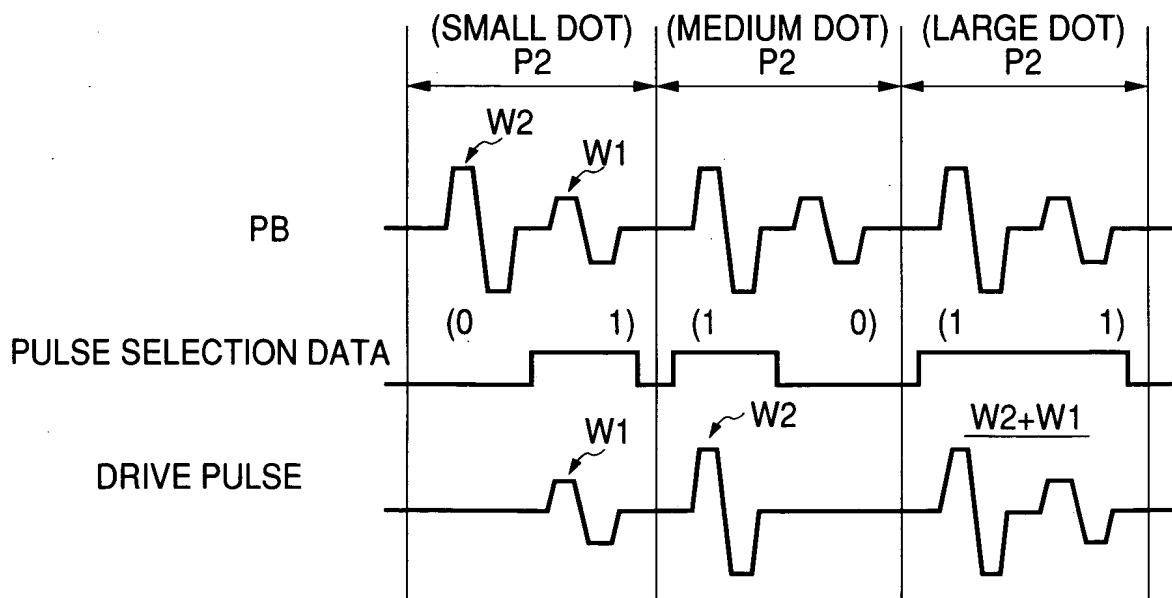


FIG. 24

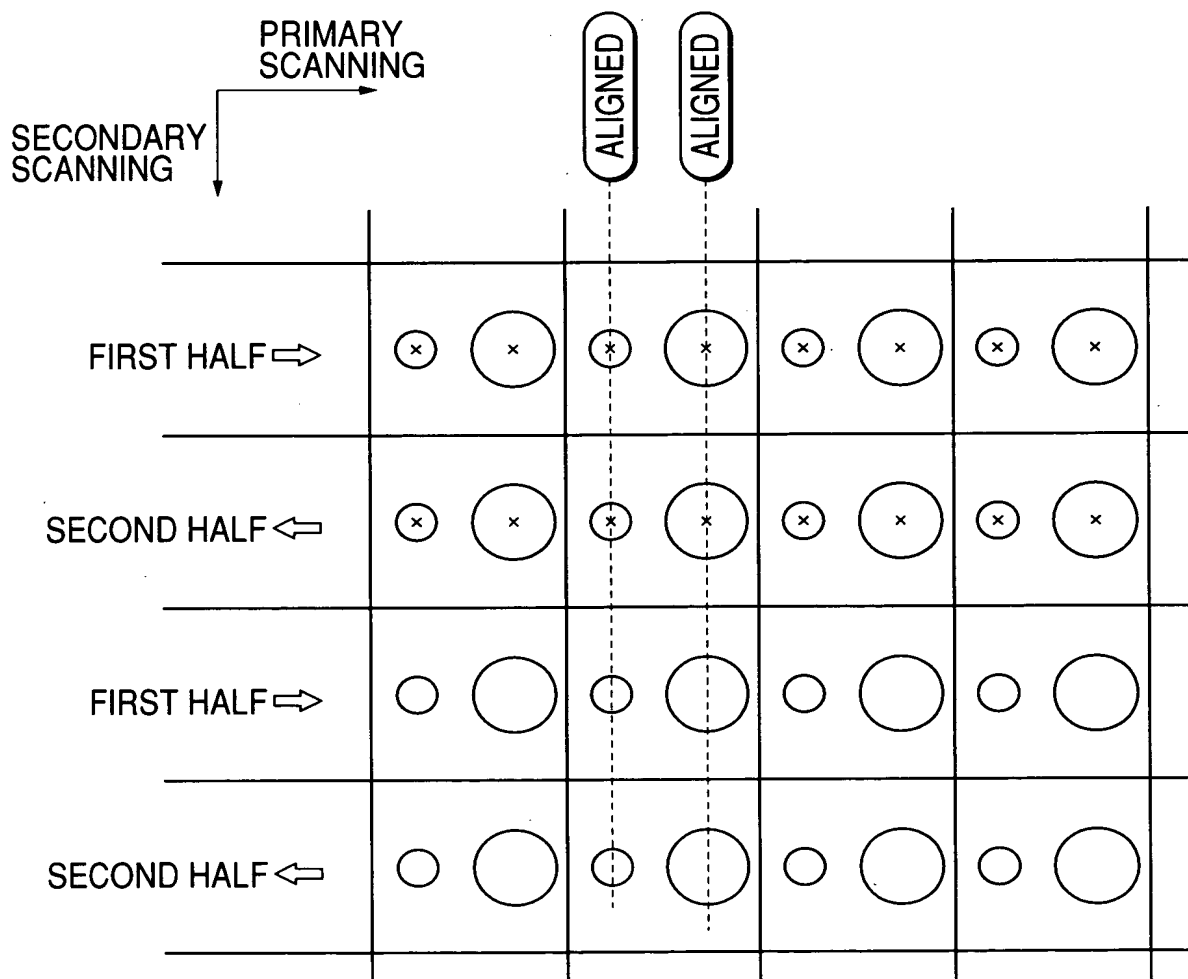


FIG. 25

